

A. INTRODUCTION

The Airport Master Plan, with its Airport Layout Plan, is the centerpiece for airport planning at the local level that addresses the development needs of an individual airport during a typical 20-year planning period. Updates are often necessary for the airport to remain in step with economic realities or changing technical and political conditions, and the FAA recommends general aviation airports should update their plans each ten years or at any other appropriate time when operational or developmental conditions warrant. Several key factors influence airport capital development needs to achieve full productivity for the aircraft using the airport. The most notable factors are growth in aviation activity and meeting FAA recommended design standards. These two factors typically represent two-thirds of the estimated projects eligible for federal grants. Three other factors; 1) the reconstruction of existing infrastructure that is beyond its useful life, 2) upgrades to the existing infrastructure to prepare airport facilities to accommodate the introduction of different aircraft, and 3) addressing safety, security and environmental concerns, account for the remainder of the eligible development projects.

B. THE PLANNING PROCESS

The purpose of the Master Plan and Airport Layout Plan (ALP) for the Easton Airport is to provide the Talbot County Council and County staff with useful, understandable information and guidance to develop and maintain a safe and efficient airport. The ALP provides the Federal Aviation Administration (FAA) and the Maryland Aviation Administration (MAA) with information concerning the planned development at the Easton Airport. The project was financed jointly by the FAA, MAA, and Talbot County.

The Master Plan Update presents the results of data collection, forecasts, alternative analysis, and recommendations for the continued development of Easton Airport. The previous Master Plan Update was published in 1998. Since that time, many FAA standards have changed and aircraft operations have increased significantly. In addition, almost a full buildout of development shown on the existing ALP is complete.

The update will concentrate on assessing the existing conditions and future needs at the airport. This assessment, along with an inventory of existing airport facilities and operations, will serve as a basis for later analysis. The Forecast of Aviation Demand (Chapter Three) discusses the demand for future growth.

Facility Requirements (Chapter Four) compares existing facilities and capacities to the forecast demand. Potential deficiencies are discussed and proposed solutions are evaluated.

The Environmental Overview (Chapter Five) includes an evaluation and report of all known and identified environmental issues on Airport property, and on adjacent property, that may be impacted by the planned development.

Alternative Development Concepts (Chapter Six) presents three alternative concepts based on the Runway Safety Area (RSA) Study (2003), with the critical component of the analysis being a comprehensive evaluation of converting Runway 15-33 to the Airport's primary runway and extending it to the length necessary to serve the Airport's critical family of aircraft. The study and findings of the Benefit-Cost Analysis will also be presented with consideration of intangible benefits and costs as well as a discussion of the sensitivity of results to changes in assumptions.

In Chapter Seven, the Airport Layout Plan sheets are presented and discussed. These drawings graphically represent the existing conditions along with all planned airport improvements for Easton Airport. The staging of development in the plan set will be tailored to meet the goals and objectives of the community for the airport over the next 20 years. The

plan set will satisfy federal guidelines for airport development identified in the Federal Aviation Administration (FAA) Advisory Circular (AC) 150/5300-13 “Airport Design” including changes 1-8.

The following is a list of sheets provided as part of the Airport Layout Plan (ALP) set, which represent existing conditions along with all planned airport improvements for the 20-year (2004-2023) period:

- Cover Sheet
- Airport Layout Drawing (ALD)
- Terminal Area Plan (TAP)
- Airport Property Map (APM – formerly Exhibit A)
- Airport Airspace Drawing
- Inner Portions of Approach Space (2 Sheets)
- Land Use Map
- Environmental Resource Sheet

Cost estimates for recommended development are presented in Chapter Eight and are provided with anticipated potential funding from federal, state, local, and private sources.

C. GOALS AND OBJECTIVES

Goals are long range community aspirations which serve to establish the direction that the airport will take. The goal of the master plan is to provide guidelines for future airport development which will satisfy aviation demand in a feasible manner, while considering aviation, environmental, and socioeconomic issues of the community. Objectives are short range attainable targets that are action oriented and designed to address specified elements consistent with the attainment of a goal.

The primary goals and objectives of the Easton Airport Master Plan Update are based on the decision by the Talbot County Council to convert existing crosswind Runway 15-33 to the primary runway. The County's comprehensive RSA study, that was conducted in 2003, presented a series of alternatives that would allow the County to achieve RSA dimensions in compliance with FAA design guidelines. As a result of that study, the Council selected an alternative that would convert the crosswind Runway 15-33 to the primary runway, and extend the runway to fully serve the Airport's critical family of aircraft. Converting Runway 15-33 to the primary runway will allow Runway 4-22 to be reduced in length from 5,500 feet to 4,500 feet, providing full compliance with FAA design standards for the runway safety area and runway object free area. The RSA study found that the runway conversion will also allow clearance of the runway protection zone of incompatible land uses for Runway 22 and ensure the Airport is developed to accommodate existing and future aviation demand.

The demand is directly related to increased operational activity by medium and large sized business jets, such as the Raytheon Hawker 700/800, Gulfstream III, IV, V, and Galaxy, and Bombardier Global Express. The Master Plan will evaluate the runway length and pavement strength required to serve the critical aircraft defined for both the primary and crosswind runways, based on standard FAA design criteria. Consideration will be given to three alternative development concepts developed in conjunction with the RSA Study that will result in a preferred operational alternative to facilitate the runway conversion. The preferred operational alternative will then become the basis for the ALP Update.

Beyond conversion and extension of Runway 15-33, additional goals and objectives of the Master Plan Update are to:

- Recommend and develop a land acquisition program that will guide the County in runway conversion process and accommodate demand for the 20-year planning period.

- Analyze existing and potential penetrations to FAR Part 77 surfaces that may present a hazard to air navigation, and recommend actions to mitigate any obstructions, and ensure the lowest possible instrument approach minimums for the Airport.
- Conduct a Benefit-Cost Analysis (BCA) that provides the necessary information and analysis for the FAA to support funding of the runway conversion project
- Recommend navigational aid (NAVAID) improvements and/or additional instrument approach procedures to better accommodate aircraft utilizing Easton Airport during periods of reduced visibility.
- Evaluate alternatives for the near-term and long-term development of additional conventional hangar and T-hangar facilities

D. GENERAL INFORMATION

1. Airport Location & Management

Easton Airport (ESN) is a general aviation airport located three miles north of the Town of Easton, Maryland. Principal vehicular access is via U.S. Route 50 to Airport Road. The immediate vicinity is served by U.S. Route 50, a four lane highway, which provides access from Ocean City, Maryland to Washington, D.C. The Airport is owned and operated by Talbot County and serves the aviation needs of the County, the Town of Easton, and the surrounding communities. Talbot County is situated on Maryland's Upper Eastern Shore on the west-central edge of the Delmarva Peninsula and encompasses 259 square miles. Ninety-nine percent of the county is surrounded by water. **Exhibit 1-1**, Airport Location Map, locates the Airport relative to Talbot County. **Exhibit 1-2**, Airport Vicinity Map, identifies the immediate vicinity around the Airport.

Exhibit 1-1
Location Map

Exhibit 1-2
Vicinity Map

2. Airport History

Easton Airport was originally constructed in 1941 as a military training facility for transport aircraft on property provided by the local community. An agreement with the military called for government use of the airfield during the war, and then return of the facility to the local municipality. Following World War II, the Airport was subsequently owned by the Town of Easton, then jointly by Talbot County and the Town. In 1993, the ownership was transferred to the County and the name was changed in honor of the late William Newnam who managed it for over 40 years. Since the initial construction, the basic airport configuration has not been significantly modified. However a modern terminal building was opened in 1987 which includes a restaurant, car rental service, FBO facility, and administrative offices. In addition, the Airport's current primary Runway 4-22 was extended to 5,500 feet in 1989.

Since the 1950's, Easton Airport has received both federal and state funding for numerous airport improvement projects (AIP). A detailed list of the various FAA/MAA grants that have been awarded to the Airport including amounts, dates, and a brief description of each project is provided in **Appendix B**.

3. Airport Role

Easton Airport is a general aviation airport serving a broad business and personal aviation community. The Airport currently has 148 based aircraft and serves approximately 90,000 civilian and military aircraft operations annually. These operations include single-engine and twin-engine aircraft used for business, pleasure and flight training, as well as significant corporate jet traffic.

The FAA is required to publish the National Plan of Integrated Airport Systems (NPIAS) as mandated by the Airport and Airways Improvement Act of 1982. This FAA planning document is updated every two years and is intended to identify the nation's airport needs over a 10-year planning period, representing a continuous planning effort. Likewise, the Maryland Aviation System Plan Update (MASPU) identifies the state's airport needs.

The most recent update to the state plan was published in two technical reports, Phase I in 1996 and Phase II in 1998. The Update forecasts the state's aviation needs for the period 1995-2015.

Airports contained in the NPIAS are categorized by their role. The role reflects one of five basic airport service levels which describe the type of service that the airport is expected to provide to the community at the end of the five year planning period. The service level also represents funding categories for the distribution of federal aid. The five basic service levels include:

- a. Commercial Service - Primary
- b. Commercial Service – Non-primary
- c. Commercial Service which also serves as a reliever
- d. Reliever Airport
- e. General Aviation Airport

In addition to defining the role of the airport, the FAA has a system to correlate airport design criteria to the operating (approach speed) and physical (wingspan) characteristics of the most demanding aircraft currently using or expected to use an airport with greater than 500 annual operations. This airport classification system is contained in FAA Advisory Circular (AC) 150/5300-13, Airport Design. The Airport Reference Code (ARC) system is comprised of two components. The first component, depicted by a letter (A-E), designates the aircraft approach category, determined by approach speed. The second component, depicted by a roman numeral (I-VI), designates the airplane design group, determined by the wingspan. **Table 1-1** identifies the Aircraft Approach Categories and Aircraft Design Groups that have been established by the FAA.

The NPIAS and the MASPU list Easton Airport as a general aviation airport. The airport reference code as listed on the currently approved Airport Layout Plan (ALP) is D-II. Examples of aircraft that may typically operate at a D-II airport and their respective

airport reference code classifications are listed in **Table 1-2**.

Table 1-1
Easton Airport
Approach Categories and Design Groups

Approach Category	Aircraft Design Group
A - Less than 90 knots	I - Wing span less than 48 feet
B - 91 to 120 knots	II - Wing span 49 feet to 78 feet
C - 121 to 140 knots	III - Wing span 79 feet to 117 feet
D - 141 to 165 knots	IV - Wing span 118 feet 170 feet
E - Greater than 165 knots	V - Wing span 171 feet to 196 feet
	VI - Wing span 197 feet to 262 feet

Source: FAA AC 150/5300-13, Airport Design

Table 1-2
Easton Airport
Typical Aircraft

Aircraft	ARC	Approach Speed (Knots)	Wing Span (ft.)	Max Takeoff Weight (lbs.)
Cessna 150	A-I	55	33	1,600
Cessna 172	A-I	61	36	2,658
Beech Bonanza F33A	A-I	70	34	3,400
Piper Navajo	B-I	100	41	6,200
Beech Baron 58P	B-I	101	38	6,200
Cessna Citation I	B-I	108	47	11,850
Cessna Conquest 441	B-II	100	50	9,925
Beech King Air B200	B-II	103	55	12,500
Dassault Falcon 20	B-II	107	54	28,660
HS-125 Series 700	C-I	125	47	24,200
Cessna 650 Citation	C-II	131	54	21,000
Bombardier CL-600	C-II	125	62	41,250
Grumman G-III	C-II	136	78	68,700
Gates Learjet 35	D-I	143	40	18,300
Grumman G-IV	D-II	145	78	71,780
Grumman G-V	D-III	160	99	89,000

Sources: FAA AC 150/5300-13, Airport Design
Delta Airport Consultants, Inc.